

**DEPARTMENT OF TRANSPORTATION****Federal Highway Administration****23 CFR Part 655**

[FHWA Docket No. 95-8]

RIN 2125-AD57

**National Standards for Traffic Control Devices; Revision of the Manual on Uniform Traffic Control Devices****AGENCY:** Federal Highway Administration (FHWA), DOT.**ACTION:** Notice of proposed amendments to the Manual on Uniform Traffic Control Devices (MUTCD); request for comments.

**SUMMARY:** The MUTCD is incorporated by reference in 23 CFR part 655, subpart F, and recognized as the national standard for traffic control on all public roads. After the current 1988 Edition of the MUTCD was published, a decision was made by the FHWA on January 6, 1988, at 53 FR 236, to postpone rulemaking on all requests for revisions to the MUTCD except those changes which would significantly impact safety. The FHWA announced its intent to rewrite and reformat the MUTCD on January 10, 1992, at 57 FR 1134. This effort is still underway and as work progresses, many changes and modifications are being identified. The FHWA is inviting comments on proposed changes which have been received to date. As other changes are received, they will be published in a future rulemaking. These changes affect various parts of the MUTCD and are intended to expedite traffic, promote uniformity, improve safety and traffic control device application, and provide a clearer understanding of the principles contained in the MUTCD.

**DATES:** Submit comments on or before September 11, 1995.

**ADDRESSES:** Submit written, signed comments to FHWA Docket No. 95-8, Federal Highway Administration, Room 4232, HCC-10, 400 Seventh Street, SW., Washington, DC 20590. All comments received will be available for examination at the above address between 8:30 a.m. and 3:30 p.m., e.t., Monday through Friday except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard.

**FOR FURTHER INFORMATION CONTACT:** For information regarding this notice of proposed amendments or a copy of the proposed text contact Mr. Ernest Huckaby, Office of Highway Safety, (202) 366-9064, Department of Transportation, Federal Highway

Administration, 400 Seventh Street, SW., Room 3419, Washington, DC 20590. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday except Federal holidays.

**SUPPLEMENTARY INFORMATION:** The MUTCD is available for inspection and copying as prescribed in 49 CFR Part 7, appendix D. It may be purchased for \$44.00 from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, Stock No. 050-001-00308-2.

The FHWA both receives and initiates requests for amendments to the MUTCD. Each request is assigned an identification number which indicates, by Roman numeral, the organizational part of the MUTCD affected and, by Arabic numeral, the order in which the request was received.

This notice is being issued to provide an opportunity to comment on the desirability of proposed amendments to the MUTCD. Based on comments submitted in response to this notice and upon its own experience, the FHWA will issue a final rule concerning these requests.

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#### **Discussion of Requests**

The FHWA proposes to act on the above requests as follows:

##### *General Provisions (Part I)*

(1) Request I-10(C)—Standardization of Traffic Control Devices on Private Property

In October 1989, the American Association of State Highway and Transportation Officials (AASHTO) submitted a policy resolution to the FHWA recommending that each State be encouraged to adopt section 15-117 of the Uniform Vehicle Code (UVC). This section of the UVC states that traffic control devices used on private property open to the public shall be installed and maintained pursuant to the standards contained in the MUTCD.

The FHWA concurs with and supports the AASHTO resolution because it would extend the provisions contained in the MUTCD to all streets and highways open to public travel, regardless of ownership. The FHWA proposes to add language to MUTCD section 1A-3 encouraging each State to adopt section 15-117 of the UVC.

(2) Request I-12(C)—Add New Highway Classification for Special Purpose Roads

An interagency task force comprised of representatives from the U.S. Forest Service, the National Park Service, the Bureau of Land Management, the Bureau of Indian Affairs, and the Federal Highway Administration conducted a study under the Coordinated Federal Lands Highway Technology Implementation Program (CTIP) to examine the MUTCD and identify those standards which should be revised to provide more reasonable and prudent application standards for roads with very low traffic volumes in remote rural areas.

The major thrust of the proposed change is to add a new highway classification to the MUTCD for special purpose roads and a new set of standards to address the special signing needs of these low volume, low speed roads. The recommendations in the report are to allow 18" x 18" signs for these special purpose roads. The CTIP committee did not define either low speed or low volume. However, the intent of the study was to address special purpose roads as defined in the AASHTO Policy on Geometric Design of Highways and Streets. These roads

include recreation roads, resource development roads, and local service roads. The FHWA solicits comments on this proposal.

##### *Signs (Part II)*

(3) Request II-118(C)—Standard Motorcycle Warning Sign

The American Motorcycle Association requested that the MUTCD be amended to include a sign to warn motorcyclists of hazardous road conditions. The FHWA conducted an evaluation of seven possible designs to warn motorcyclists of grooved pavements, five which incorporated a motorcycle symbol with the words "grooved pavement" and two which used word messages only. Although symbolic signs are usually preferable because they can be understood more quickly than words, the motorcycle symbol signs in this study did poorly in the motorist comprehension test. The evaluation study indicated that this may be because the concept is a difficult one to portray based on typical usage of warning signs. Generally the hazard of which drivers are warned is portrayed within the diamond sign. Many of the test group subjects saw the signs as a warning to drivers of "something" and motorcycles ahead. An example of an incorrect response given was, "Warning: Grooved Pavement and Motorcycles Ahead."

Therefore, the FHWA recommends that in areas where road conditions may be particularly hazardous for motorcyclists, the State highway agencies should develop appropriate word message signs. The FHWA recommends using a rectangular warning panel with a word message such as "Motorcycles: Watch for Grooved Pavements." Since MUTCD section 2C-40 already contains provisions which allow the design of warning signs for special conditions, the FHWA believes a change to the MUTCD is not required.

(4) Request II-120(C)—Standard Warning Signs for Substandard Vertical Curves Over Railroad Crossings.

At certain locations, there is a need to alert drivers, especially those that drive vehicles with low under clearance, of differences in elevation between an approach roadway and a railroad track bed. Low profile vehicles have the potential of getting stalled at these types of railroad crossings. This could lead to an accident with a train, or at the very least, disrupt traffic. In other instances, motorists could possibly lose control of their cars when traversing such crossings without sufficient advance warning.

The National Committee on Uniform Traffic Control Devices (NCUTCD) has proposed a new MUTCD section 8B-11, Humped Crossings, which the FHWA proposes to include in the next edition of the manual. The NCUTCD is also developing an appropriate sign for this special situation. After the sign is developed, the FHWA will include both the text and the sign in a future notice of proposed rulemaking.

(5) Request II-138(C)—Stop Sign Placement

The current MUTCD Figure 2-2 shows a typical example for placement of Stop Signs at wide throat intersections. This figure represents an intersection that usually is designed for heavier than normal volumes of long wheelbase vehicles which require larger turning radii. A Stop line pavement marking is also shown with the Stop Sign. The Stop Sign can be appropriately placed a maximum of 50 feet from the stop line.

The NCUTCD and the City of Phoenix propose that this maximum distance be deleted so that intersections with greater radii are also covered.

The FHWA does not recommend placing the Stop Sign back more than 50 feet. Placing the Stop Sign at a maximum of 50 feet from the stop line keeps the sign well within the driver's cone of vision. Installing it back farther may place the sign so far from the stop line and the cross street that the intended operation may present confusion to the general motorist. Raised or marked islands and/or channelized intersections are alternative applications which may be used at these special locations.

(6) Request II-179(C)—Don't Drink and Drive Symbol Sign

The FHWA has received requests from concerned citizens and Mothers Against Drunk Driving (MADD) to include a symbol sign in the MUTCD to deter the drinking public from driving while intoxicated. The FHWA Office of Research and Development collected recognition and comprehension data for several variations of this sign. As a result of this research, the FHWA proposes to add the proposed symbol (as shown below) into MUTCD section 2B-44 "Other Regulatory Signs," because it performed very well in the evaluation study and its message of "drive sober" covers both drivers under the influence of alcohol and drivers under the influence of illicit drugs. As proposed, the sign's legend and border would be black, the circle green, and the background white.



Figure 1

(7) Request II-193(C)—Logos on Specific Service Signs

The NCUTCD has requested that the following sentence in MUTCD section 2G-5.2 be deleted: "Logos should have a blue background with a white legend and border." Because of the way it is written, it seems to control corporate logo designs. It was not the intent of the FHWA to control corporate logo designs. The sentence is correct and should not be deleted, although the FHWA agrees that it could be more clearly written. Therefore, the following additional sentence is proposed: "A business LOGO can be either a business

identification symbol/trademark or a word message. If the business LOGO is a word message, then it should have a blue background with a white legend and border." This clarification will be included in the MUTCD rewrite effort.

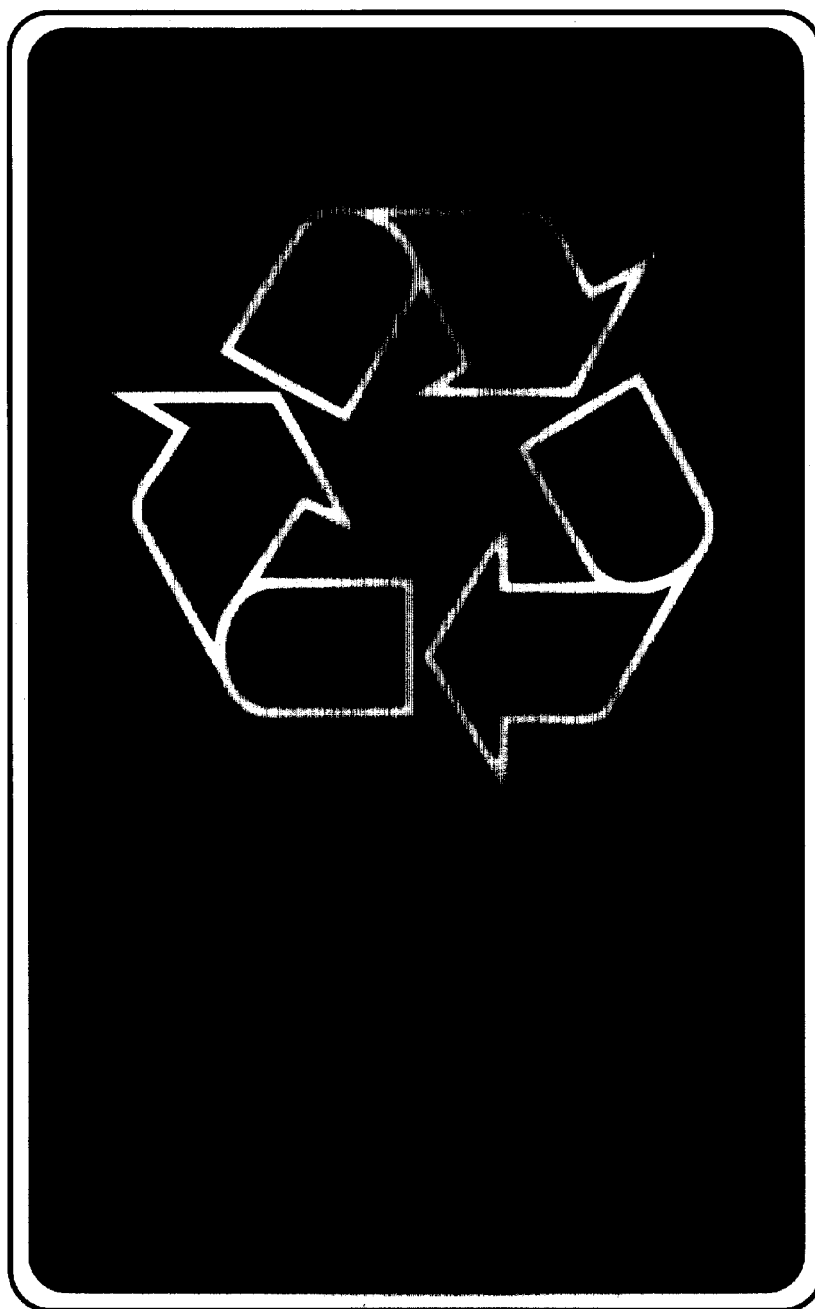
(8) Request II-194(C)—Recycling Collection Center Sign

The Florida Department of Transportation recommended that the MUTCD include a Recycling Collection Center Sign in view of new State laws and initiatives to prevent waste and protect the environment. The purpose of the sign is to direct motorists to

recycling collection centers. The recycling symbol suggested by Florida is the one developed for use by the Recycled Paperboard Division of the American Paper Institute of New York.

Since this symbol is already in use and recognized by the public, the FHWA proposes to include this symbol in MUTCD section 2D-48, "General Information Signs." These signs should not be used on freeways and expressways. If used on these facilities, the recycling center sign should be considered as one of the supplemental sign destinations.

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***COLORS***  
***WHITE REFLECTIVE LEGEND AND BORDER***  
***ON REFLECTIVE GREEN BACKGROUND***

Figure 2

(9) Request II-199(C)—Reclassify Reduced Speed Ahead Sign Series

Florida's Palm Beach County Department of Engineering and Public Works submitted a request to the FHWA to consider reclassifying the R2-5 series of signs as warning rather than regulatory signs. As presently worded, the R2-5 series signs convey an advance warning to motorists that there is a change in the regulatory speed limit ahead. Palm Beach County's proposed change would make the relationship between the "Reduced Speed Ahead" and "Speed Limit" signs similar to the relationship between the "Stop Ahead" and "Stop" signs.

The FHWA proposes to deny this request since, from a traffic operational standpoint, these signs perform adequately as regulatory signs. To change the present signs from black on white to black on yellow signs would impose an unnecessary cost burden to the State and local highway agencies.

(10) Request II-204(C)—Golf Cart Crossing Symbol

The FHWA received a request from both Virginia Beach, Virginia, and Palm Desert, California, to develop a warning symbol for golf cart crossings. The information received from Palm Desert's Public Works Department indicates that the golf cart is used in this area as an alternate, non-polluting source of transportation. They have indicated a need for not only a golf cart crossing symbol but also for a sign to warn motorists to share the roadway with these slower moving vehicles.

The FHWA is conducting a research effort to determine what type of signing is appropriate for safely accommodating these special-use vehicles along the roadway. The FHWA is also interested in receiving public comments and suggestions regarding this proposal.

(11) Request II-205(C)—Mandatory Turn Sign Alternatives

The FHWA received a request from a citizen in Florida who suggests that the Mandatory Movement Sign (R3-5) be optionally permitted as a post-mounted sign because the symbol appears to be more understandable than the mandatory turn word message sign (R3-7), particularly for persons speaking foreign languages.

The R3-5 symbol sign as discussed in MUTCD section 2B-17 is intended for overhead mounting and the R3-7 word message sign is intended for post mounting. These mandatory movement signs are included in a series of lane use control signs for the purpose of communicating lane designation information to the driver. These signs help position the motorist in the appropriate lane for the desired traffic movement.

The FHWA proposes to make the present requirements of the MUTCD less restrictive and allow either of the designated overhead and post-mounted signs to be used interchangeably. Such a change would impose no additional financial costs or burden on the State highway agency.

(12) Request II-209(C)—Signing for the Disabled

On July 26, 1991, the United States Architectural and Transportation Barriers Compliance Board published accessibility guidelines at 56 FR 35408 (36 CFR part 1191) which require that at least one in eight reserved parking spaces for the disabled be designed to accommodate vans. These parking spaces are required to be identified by a parking sign showing the international symbol of access (wheel-chair symbol) with a supplemental "Van Accessible" sign mounted below.

The MUTCD already contains a standard reserved parking sign (R7-8)

for the disabled. However, it does not contain any discussion on the design and application of the new "Van Accessible" sign. Therefore, the FHWA proposes to include the "Van Accessible" sign as a supplement to the standard R7-8 regulatory sign. When used, this word message sign should have a white background with black or green legend. Reverse background and legend colors may be used as an alternate. Where a guide sign is needed to direct motorists to special van-accessible parking facilities, the proposed "Van Accessible" sign should have a white legend on blue background with an appropriate directional arrow.

The FHWA proposes to add the design dimensions for this sign to the Standard Highway Signs Book and to add appropriate text to the MUTCD section 2B-31, "Urban Parking and Stopping Signs." The FHWA believes that this proposed amendment would impose no significant financial burden on State and local highway agencies because the "Van Accessible Sign" is intended for use only at parking locations where traffic laws and statutes apply.

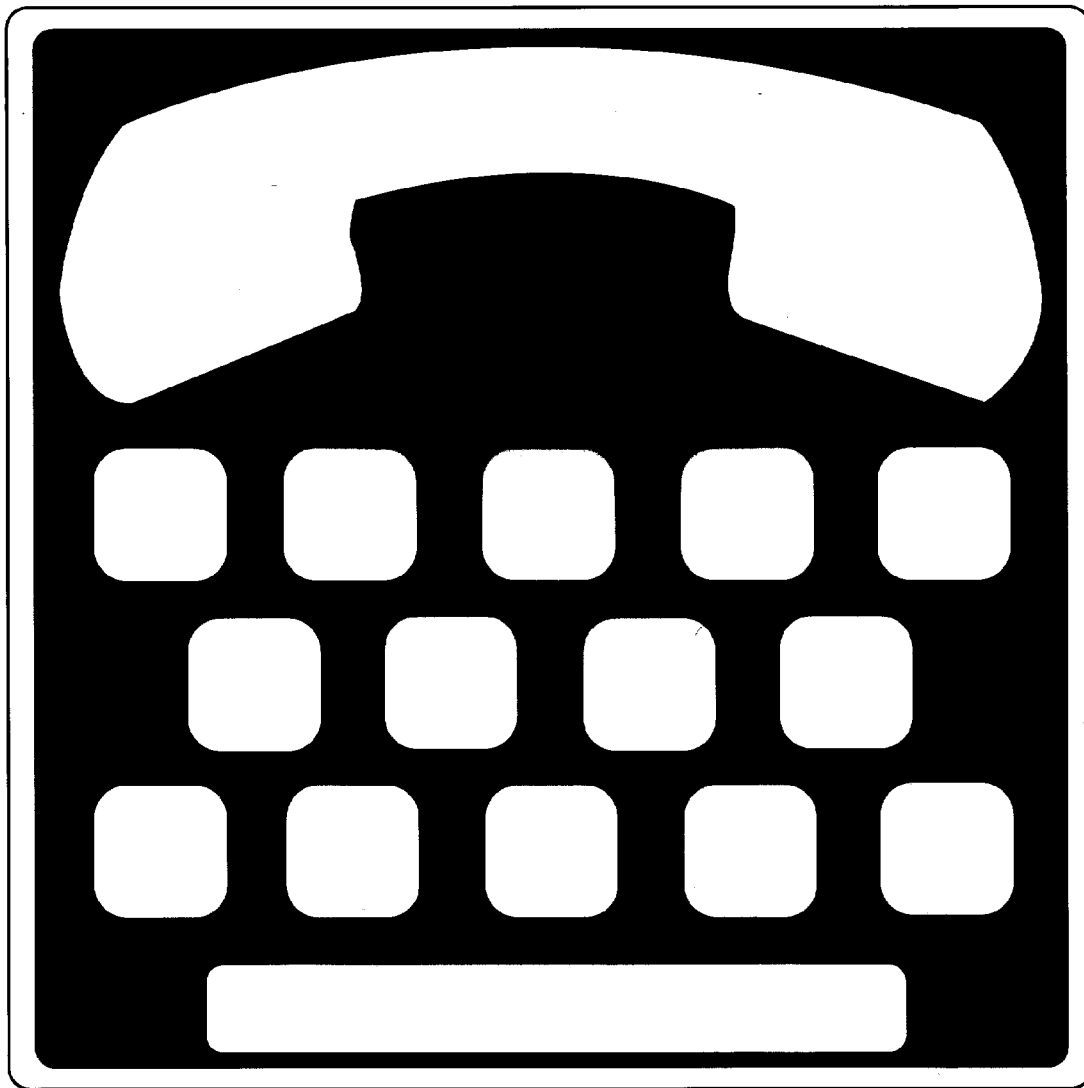
The accessibility guidelines at 36 CFR part 1191 also contain construction requirements for accessible buildings or facilities. The guidelines identify facilities and elements thereof which are required to be signed as accessible. Buildings required to be accessible shall use the international symbol of accessibility as shown in figure (a) below. In addition, building requirements are also provided for signing facilities which have public text telephones and assistive listening systems. The symbol for text telephones is shown in figure (b) and the symbol for assistive listening systems is shown in figure (c).

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(a)  
**International Symbol of Accessibility**

FIGURE 3A



**(b)**  
**International TDD Symbol**

FIGURE 3B





**(c)**  
**International Symbol of Access for  
Hearing Loss**

Figure 3C

The FHWA received a request from a citizen to install the telephone symbols along the Interstate system to direct motorists to the buildings and facilities which are accessible for the hearing impaired. The FHWA is soliciting public input as to whether or not this request has merit and can be practically implemented. Should such signs be used in conjunction with General Service signs and/or Specific Service signs, or could they stand alone? Once motorists were directed to the appropriate freeway exit, they would still need to be guided to the appropriate building or facility. Does a series of confirming sign assemblies need to be installed to reassure the traveler that they are headed in the right direction? Are the proposed sign designs legible to the motorist at high speeds? Will the motorist comprehend the intended sign message? What effect will this proposed change have on the local level? How is information of this nature currently made available to the hearing-impaired community?

Your response to these questions or any other comments which you may be able to provide will help us to reach an appropriate decision regarding this request.

(13) Request II-211(C)—Non-Carrier Airport Symbol

The AASHTO submitted a resolution to the FHWA recommending a new symbol sign in the MUTCD to identify non-carrier airports. Non-carrier airports are airports which do not provide commercial or scheduled air service.

The MUTCD section 2D-48, "General Information Signs," contains provisions for signing routes leading to a transportation facility, including a

symbol for airports. Rather than adopting a different symbol sign for non-carrier airports, the FHWA prefers the use of the standard airport symbol (I-5) along with a supplemental plaque to indicate the specific name of the non-carrier airport. The FHWA believes that this would be easier for the motorist to recognize and comprehend as opposed to trying to distinguish the difference between two airplane symbols. From a distance and at high speeds, the two airplane symbols could appear very similar to the motorist.

Although the FHWA does not intend to adopt a new symbol sign for non-carrier airports, it does propose to include a discussion in the MUTCD on these two types of airport signing. When used, these signs will be considered supplemental guide signs which are appropriate for use on the Interstate, other freeways, and conventional State highways. However, adequate trailblazing signs would have to be in place prior to installing these airport signs.

(14) Request II-212(C)—Increased Letter Size of Street Name Signs

The NCUTCD submitted a request to the FHWA to improve the visibility of street name signs by increasing the minimum letter size from 4 inches to 6 inches. If uppercase and lowercase letters are used, then the uppercase letters would be 6 inches with 4½ inch lowercase letters. Abbreviated lettering to indicate the type of street or section of city (e.g., Ave., N.W., etc.) would be at least 3 inches instead of 2 inches. The NCUTCD also recommends that retroreflectivity be required on all street name signs.

The FHWA recognizes the need to improve sign visibility and legibility, particularly for the older driver population. The Transportation Research Board (TRB) Special Report No. 218, "Transportation in an Aging Society," identified highway and street name signs as a major concern for older drivers. The FHWA proposes to increase the letter size of signs and include the recommended dimensions in MUTCD section 2D-39. Since this proposed amendment would impose some additional costs on State and local highway officials, the FHWA would establish an implementation period.

(15) Request II-214(C)—Golf Course Recreational Area Symbol

The Montana Department of Transportation (MTDOT) submitted a request to the FHWA to include a symbol in the Recreational and Cultural Interest Area Signs (MUTCD section 2H) to direct motorists to golf courses. This symbol would be white on a brown background and it would be included in the RG or RL series.

The proposed symbol submitted by the MTDOT and shown below needs to be evaluated along with other possible designs to determine if they can be safely seen, read, and comprehended by the motorists without creating any traffic operational problems. The FHWA is soliciting comments on the proposed design. The FHWA is also interested in receiving other possible designs for evaluation purposes. The FHWA does not have any conclusive evaluation data at this time to make an informed decision concerning the proposed sign.

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Figure 4

(16) Request II-215(C)—Regulatory and Street Name Signs on Same Post.

The Public Works Department in Cary, North Carolina, submitted a request to the FHWA to include the installation of a Street Name Guide Sign on the same post with a Regulatory Sign as a standard traffic control device application. After reviewing the evaluation report submitted by the North Carolina State University's Department of Civil Engineering, the FHWA finds that the proposal has merit as an alternate application and makes the following recommendations: (1) If the two signs are placed on one sign post, the proper location of the

Regulatory Sign should not be compromised by the Street Name Sign; and (2) there should be vertical separation between the top and the bottom of both signs. This separation should not be less than 6 inches. This would make it clearer to the motorist that these are two distinct signs with two distinct messages.

The FHWA proposes to adopt this arrangement as an alternate application since its use may simplify the sign installation process and improve motorist guidance information. Since this amendment would impose no requirements or additional costs on highway agencies, the FHWA believes

an implementation period would not be necessary.

(17) Request II-218(C)—Reduce Number of Panels Displayed on Directional Assemblies.

A citizen from Richmond, Virginia, has requested a change to directional assembly installations to reduce the amount of information displayed. Instead of displaying a route shield and route number for each direction of travel, the route marker assembly would display only one route shield and route number with appropriate cardinal directions and arrows.

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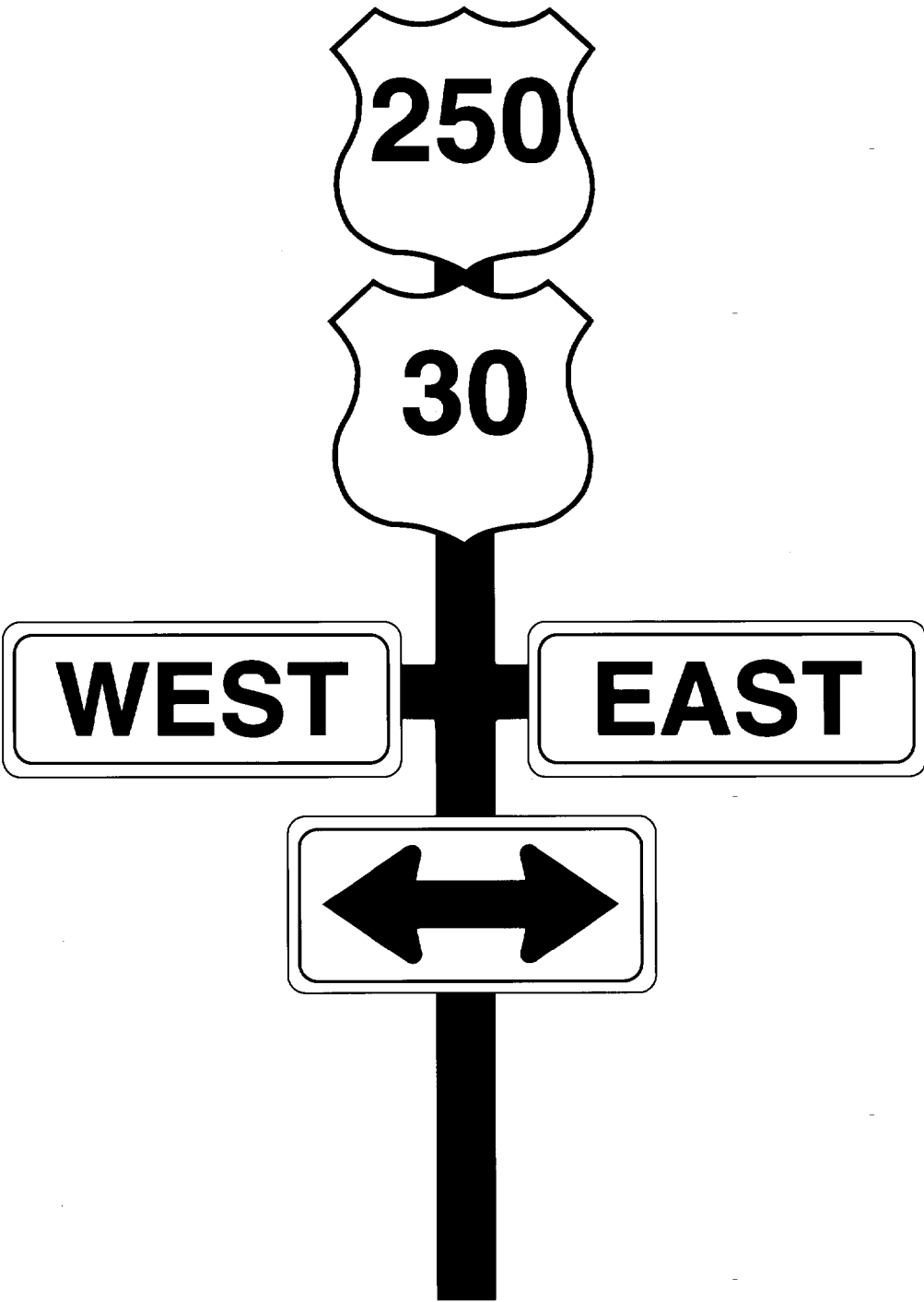


Figure 5

The FHWA proposes to adopt this request for change as an optional application for use in situations where an engineering study determines that motorist confusion would not result. This proposal would impose no additional requirements or costs on highway agencies; therefore, an implementation period would not be necessary.

(18) Request II-224(C)—Cellular Phone Signing for Emergency Situations.

The Massachusetts Highway Department has submitted a request to include a State Police Cellular Phone Sign into the MUTCD. The proposed sign (as shown below) contains the standard telephone symbol (D9-1) and the standard police sign (D9-14). One of the prerequisites for adopting any proposed sign is that the sign message must be uniformly understood by

motorists and not create traffic safety or operational problems. Consideration is given to the sign's target value, conspicuity, and legibility. The FHWA is concerned that the antenna shown in the proposed sign drawing may not be legible to the motorist at certain distances and speeds. The FHWA is also concerned that some motorists may not comprehend the sign's intended message.

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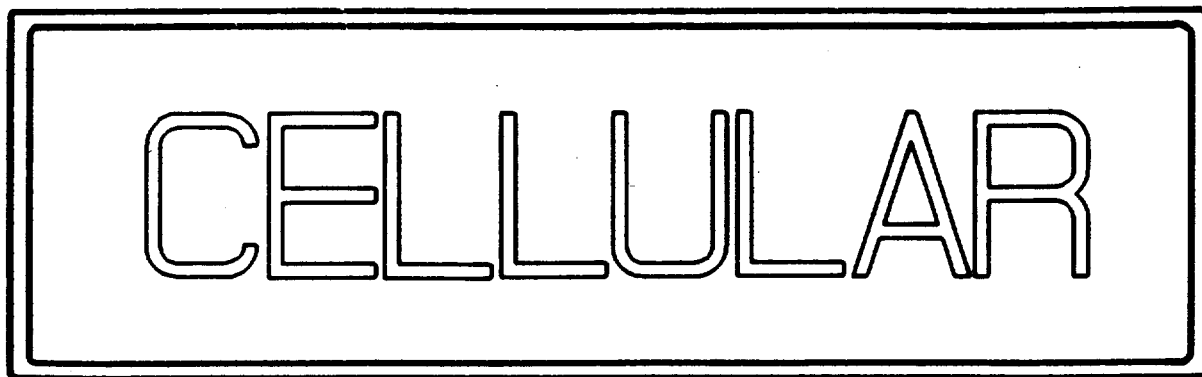
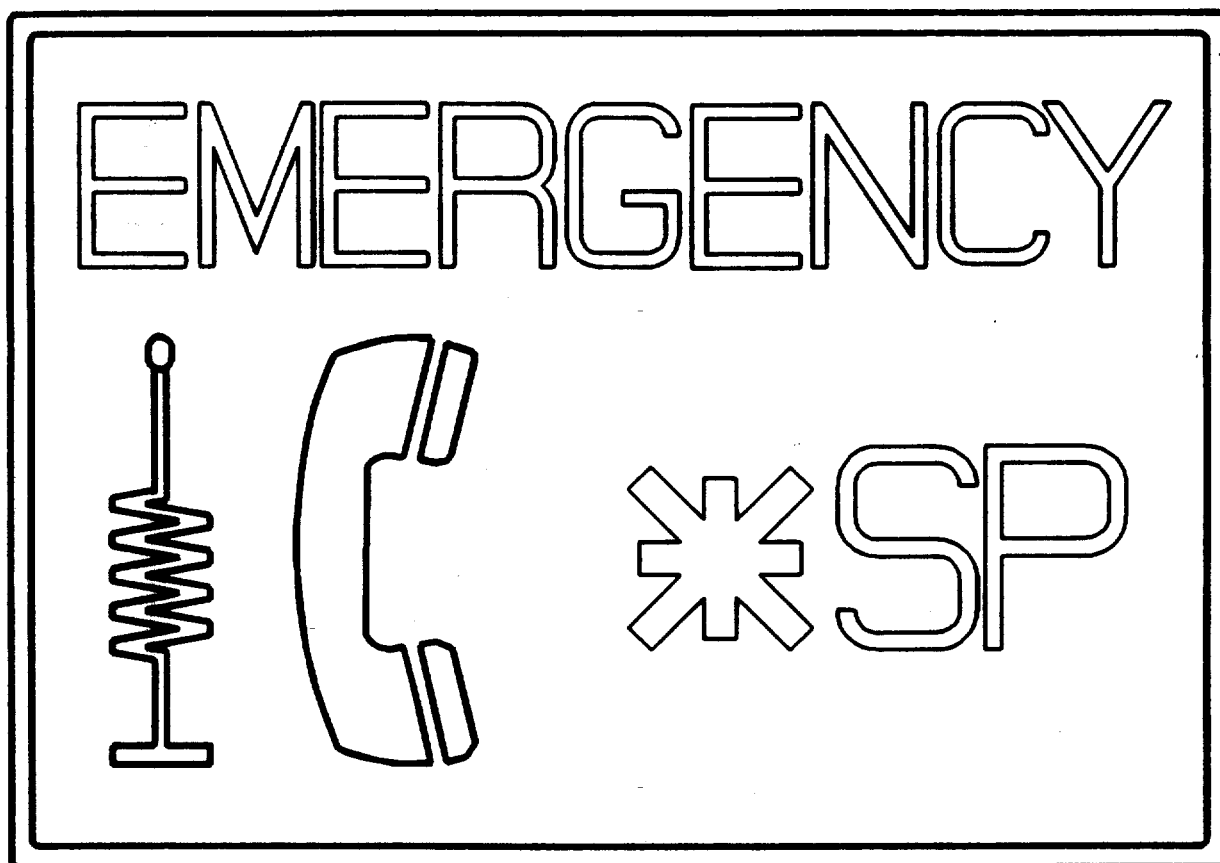


Figure 6

Therefore, the FHWA recommends using a word message sign similar to the standard D12-3 sign. The sign would read, "Police Monitor Cellular Phone" along with the appropriate number to dial (which may vary from region to region). This proposal would impose no requirements or additional costs on highway agencies.

(19) Request II-225(C)—Local Transit Logo and Carpool Symbol

The Texas Department of Transportation (TXDOT) submitted a request to the FHWA to allow the maximum vertical dimension of transit system logos on Park and Ride Signs to be increased to 36 inches for freeways and expressways. Currently, MUTCD section 2D-41 specifies a maximum logo size of 18 inches.

The FHWA concurs in this request. Larger signs provide greater legibility on high speed facilities such as freeways and expressways. Therefore, the FHWA proposes to change the last sentence in the second paragraph of MUTCD section 2D-41 to read, "The maximum vertical dimension of the local transit logo and/or carpool symbol is 36 inches." This amendment would impose no additional requirements or costs on highway agencies.

(20) Request II-226(C)—General Motorist Service Signing for Alternative Fuels

The FHWA has received a second request from the TXDOT asking us to expand the provisions for General Motorist Services Signs to include an additional category of "Alternative Fuels." This signing would include the following fuels: propane, compressed

natural gas, ethanol, and methanol. The TXDOT proposal recommended installing a separate, stand-alone service sign dedicated to alternative fuels. This service sign would be separate from the conventional general motorist services.

The FHWA agrees that the increasing number of vehicles using alternative fuels (in response to, among other things, the Clean Air Act Amendments of 1990) warrants consideration of additional signs meant to provide availability information to motorists, particularly on freeways. The FHWA solicits public comments and suggestions concerning this proposal. The FHWA is also interested in receiving any typical application drawings to show how these signs may be installed, if adopted.

(21) Request II-228(C)—"Share the Road" Warning Signs

A citizen from Rudolph, Ohio, supported by a number of Farm Bureaus in the State of Ohio requested that the FHWA improve the standard highway farm machinery symbol sign (W11-5) to more accurately depict modern farm equipment. In addition, the sign should warn motorists to watch for slow moving farm machinery not only crossing the roadway but also traveling along the roadway.

The FHWA agrees that there is a need for a series of signs to warn motorists to "share the road" with various roadway transportation modes. "Share the road" signs have been requested for not only farm machinery but, also for golf carts and bicycles.

The FHWA is conducting a research study to develop an appropriate sign for these situations. Public comments and

suggestions are welcomed. Our goal is to find a method of communicating to the driver these two related but different warning messages: (1) crossing the roadway and (2) traveling along the roadway.

(22) II-229(C)—General Service Sign (Truck Parking Symbol)

This request from the Michigan Department of Transportation (MDOT) is to include "TRUCK PARKING" as an eligible message which can be included on General Service Signs as discussed in MUTCD sections 2D-45, 2E-37, and 2F-33. This sign is only to be used where public or private parking facilities are provided near a freeway or expressway interchange.

The MDOT has experimentally used these signs since 1990 and has found the number of illegally parked trucks on shoulders and ramp acceleration/deceleration lanes has dropped, with a substantial reduction in accidents and fatalities. In addition, truck use of rest areas has decreased while use of privately managed truck stops has increased.

While symbol signing is used for other General Service Signs, this request is to use the word message "TRUCK PARKING" above these symbols as shown in the diagram below. The FHWA supports the overall concept of this proposal and invites comments on the concept of using the word message "TRUCK PARKING" with other general service symbol signs. We also welcome suggestions for a "TRUCK PARKING" symbol.

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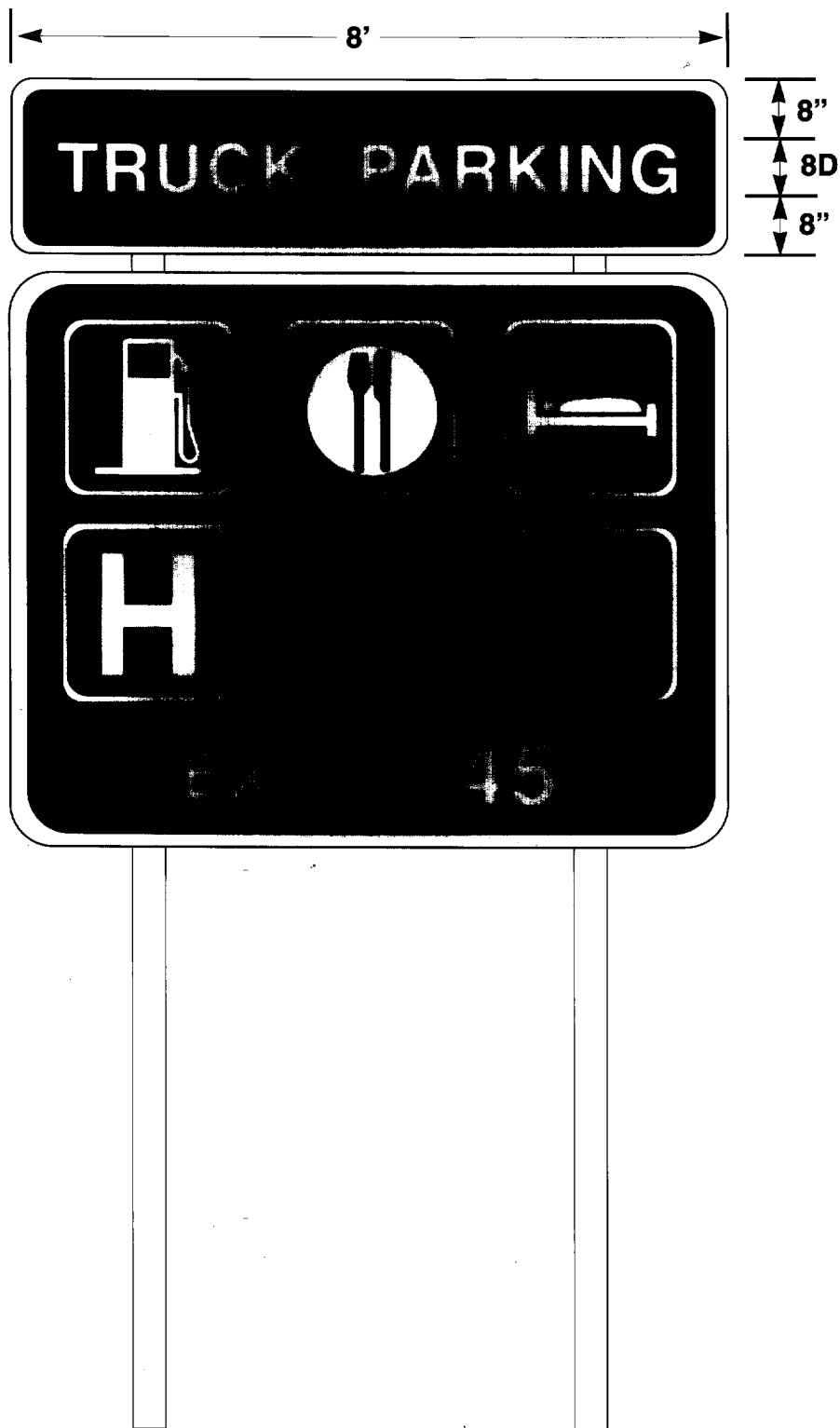


Figure 7

(23) Request II-241(C)—Overhead Guide Sign Arrows

The FHWA received a request from a citizen in Hartsdale, New York, concerning improving overhead guide signs by using consistent directional arrows which point upwards and which indicate if the roadway turns to the left or to the right. This suggestion is based on the belief that the current downward pointing arrows are misleading and confusing to the motorist. In MUTCD sections 2D-8 and 2E-15 downward pointing arrows are currently classified as pull-through arrows for the purpose of assigning proper lanes for traffic continuing along a specified route. However, the citizen suggests that this intended message is neither helpful nor even understood by many motorists.

The FHWA is considering this request for change, since it has the potential to provide more consistent, timely, and useful information to the motorist. The FHWA is soliciting comments on the feasibility and effect of implementing this proposed change to the MUTCD.

(24) Request II-246(C)—Adopt-A-Highway Signs

The Adopt-A-Highway Program provides free litter removal to the jurisdiction responsible for roadway maintenance in exchange for the right to display a small sign recognizing the group removing the litter. Since the program's inception in the fall of 1985, at least 34 States now have implemented Adopt-A-Highway Programs. Some of the States using the program limit participation to civic groups, while others allow display of commercial messages. There is also a wide variance in the size of the recognition signs allowed to be displayed within the highway right-of-way, varying from 2 feet by 4 feet to 6 feet by 12 feet. In addition, the background and letter color of these signs varies from State to State. There is also variance in the lateral placement and the frequency of placement of these signs.

The FHWA proposes to include standards for the Adopt-A-Highway sign in MUTCD section 2D-48, General Information Signs. We are interested in recommendations regarding maximum and minimum sizes, background and message colors, and sign placement criteria, including lateral placement and frequency of placement.

*Markings (Part III)*

(25) Request III-54(C)—Variation of Line Width and Spacing for Crosswalks

The Kansas Department of Transportation (KSDOT) and the

NCUTCD have requested a change to section 3B-18 of the MUTCD. The last paragraph of this section of the MUTCD currently states that the longitudinal crosswalk lines should be spaced 12 to 24 inches apart. This proposed change would increase the maximum spacing from 24 to 48 inches with a maximum spacing not to exceed twice the line width.

Presently, we have no statistical data to show that the proposed maximum spacing of 48 inches will not adversely affect visibility. The possibility exists that a crosswalk area could end up with only one longitudinal marking on a 12-foot roadway. The FHWA agrees that from an installation and maintenance standpoint the use of wider spacings is more economical. However, the FHWA does not wish to see pedestrian safety compromised. The current maximum longitudinal spacing of 24 inches is so the crossing area will be highly visible and recognizable both for the motorist and for the pedestrian.

The FHWA hesitates to change the MUTCD without evaluation data which supports the design safety of the proposed crosswalk configuration. Since there are no operational problems relative to the standard 24-inch maximum spacing, the FHWA intends to deny this request for change.

(26) Request III-68(C)—Lane Drop Marking Pattern.

The Montgomery County Department of Transportation in Rockville, Maryland, has requested that MUTCD section 3A-6 be modified to include the lane drop marking pattern since this section of the MUTCD contains descriptions for various widths and patterns of longitudinal lines. Lane drop marking patterns are currently described in the fourth paragraph of MUTCD section 3B-11. Since section 3A-6 describes widths and patterns of longitudinal lines, the FHWA agrees that the lane drop marking pattern should also be included in this section of the MUTCD.

Additionally, Montgomery County suggested that the term "special marking" as used in the fourth paragraph of section 3B-11 should be changed to "lane drop marking" and that the use of this marking pattern should not be restricted to interchange ramps, but should also be available for use with mandatory lane drops on arterial streets and highways.

In order to further consistency and clarity in traffic operation messages, the FHWA proposes to adopt the above changes to the MUTCD. These amendments would impose no

additional requirements or costs on highway agencies.

*Signals (Part IV)*

(27) Request IV-47(C)—Use of Steady and Flashing Yellow Arrows in Lane Control Signals

The Minnesota and Texas Departments of Transportation (MNDOT and TXDOT) have proposed MUTCD changes to the YELLOW lane-use control signal indication used on freeways. The MNDOT also proposed changing the MUTCD to allow darkening of lane control signals that are used for non-reversible freeway lane operation.

MUTCD Section 4E-9 provides the following meanings for YELLOW lane-use control signal indications:

1. A steady YELLOW X means that a driver should prepare to vacate, in a safe manner, the lane over which the signal is located because a lane control change is being made. The driver should avoid occupying that lane when a steady RED X is displayed.

2. A flashing YELLOW X over a lane means that a driver is permitted to use that lane for a left turn. The driver is cautioned that he may be sharing that lane with opposite flow left-turning vehicles.

The MNDOT identified a need to provide an additional signal message when incidents, maintenance activities, or congestion require drivers using these reversible lanes to exercise caution. MNDOT conducted an experimentation with two new lane use control signal indications:

1. A steady Downward YELLOW ARROW meaning the same as a steady YELLOW X.

2. A Flashing Downward YELLOW ARROW meaning that a driver is permitted to cautiously use the freeway lane over which the signal is located.

The research showed that 84% of the respondents interpreted the proposed steady YELLOW ARROW as meaning the driver may use this lane, but should use extra caution. The intended meaning should have been the same as the steady YELLOW X definition above. The understanding rate for the proposed Flashing Downward YELLOW ARROW was 50% which means that one-half of the respondents incorrectly interpreted its meaning.

In order to not mislead drivers, the MNDOT also proposed darkening the lane control signals when they were not in operation.

The TXDOT provided an alternate proposal to keep the MUTCD meanings for lane-use control signals and add a new lane control indication—a steady

Downward YELLOW ARROW. The meaning of this new lane control indication would be that the driver can use this lane with caution. However, because of the lack of understanding of the Flashing and Steady Downward YELLOW ARROWS FHWA does not support this proposed change to the MUTCD.

The FHWA proposes the following:

1. To revise MUTCD section 4E-12 to allow darkening of lane control signals that are used on non-reversible freeway lanes;
2. To deny the MNDOT's request for change in the MUTCD relative to the use of steady and flashing YELLOW ARROW lane control signals;
3. To deny the TXDOT's request for a change to allow the use of steady YELLOW ARROW lane control signals; and
4. To permit the MNDOT and the TXDOT to conduct further experimentation in the use of steady and flashing yellow arrow lane control signals.

The NCUTCD concurs with the FHWA's position. The proposed change to allow darkening of lane control signals on non-reversible freeway lanes would impose no additional cost on highway agencies.

(28) Request IV-95(C)—Intersection Control Beacons

The Military Traffic Management Command, Department of the Army, suggested that two beacons and a stop sign should be required on each intersection approach controlled by a "RED" Intersection Control Beacon. An Intersection Control Beacon consists of one or more sections of a standard traffic signal head, having flashing CIRCULAR YELLOW or CIRCULAR RED indications in each face.

The FHWA believes that in the majority of situations, one signal indication would provide adequate visibility. However, for added visibility the first paragraph of section 4E-3 already allows the use of supplemental beacons.

To provide a back-up for the Intersection Control Beacon in the event of a bulb burn out, the NCUTCD proposed that a mandatory requirement for a STOP sign is necessary. The FHWA agrees, and proposes to amend the MUTCD to require a STOP sign as backup for the Intersection Control Beacon. This amendment would impose no significant increase in costs to highway agencies.

(29) Request IV-118(C)—Relocate Section 4C, Signal Warrants

The NCUTCD has requested that MUTCD section 4C, "Warrants for Traffic Signals," be relocated before section 4B, "Traffic Control Signals." This text relocation will allow a user of the MUTCD to determine if signals are justified before looking at the text that describes signals and their design.

The FHWA supports this proposed amendment. This amendment would impose no additional costs on highway agencies.

(30) Request IV-122(C)—Disabled Pedestrians

A citizen in Marysville, California, suggested that the MUTCD be revised to better address the needs of older and disabled pedestrians. It was suggested that pedestrian detectors (usually push button) be easily activated for pedestrians with physical disability. It was also suggested that a system, known as the "Turtle Crosswalk" and developed at the University of Alberta, be implemented at intersections where

pedestrian signals are installed. This system provides a second push button that allows additional time for slower walking pedestrians to cross the roadway. The second button would only be activated by pedestrians needing additional time to cross the roadway.

The FHWA agrees with this amendment and proposes to add the following paragraph after the first paragraph in section 4B-29:

Pedestrian detectors (push buttons) should be easily activated. At signalized intersections with demonstrated need, a second detector with instructional signing may be installed to provide additional crossing time for slower walking pedestrians.

This amendment may impose some additional costs on highway agencies; therefore, an implementation period would be established.

(31) Request IV-124(C)—Educational Plaque for Pedestrian Signals

The City of San Buenaventura, California, developed a sign to improve pedestrian understanding of the WALK and DONT WALK indications at signalized intersections. The sign is proposed to be used at locations with either word or symbol pedestrian crossing messages. The signs would be installed where at least 10 pedestrians an hour use the crosswalk and at other high traffic-generating areas, such as, hospitals and schools.

The FHWA does not feel that the sign should be mandatory at all intersections where pedestrian indications are located. The location for these signs should be left to engineering judgment. The sign design and wording is shown below. Alternative designs or wording are welcome.

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Figure 8

The FHWA is soliciting public comments and suggestions concerning this proposal.

(32) Request VI-88(C)—Emergency Flashers

Southern Bell requested that section 6F-7c of Revision 3 to the MUTCD be amended to allow the use of emergency flashers on maintenance vehicles during normal daytime maintenance operations.

Southern Bell operates a large number of small service vehicles that provide telecommunication services to

businesses and residential homes. Southern Bell feels that the operation of emergency flashers, in addition to rotating domes and strobe lights, are appropriate for these vehicles.

After review of this matter, the FHWA has found no research or operational experience that shows emergency flashers create an unsafe condition. Accordingly, the FHWA proposes to allow the use of emergency flashers on maintenance vehicles during normal daytime maintenance operations. This would give public agencies an

alternative method for displaying flashing beacons.

(33) Request VII-2(C)—School Bus Stop Ahead Symbol Sign

The North Carolina Department of Transportation has submitted a symbol sign for use as an alternate to the "School Bus Stop Ahead" word message sign. The proposed warning sign depicts a bus with the extended signal arm with the Stop Sign as shown below.

BILLING CODE 4910-22-P



Figure 9

Since the MUTCD does not contain a symbol for the school bus sign, the FHWA proposes to adopt the symbol sign shown above and include it as an option in MUTCD section 7B-11. This proposal would not impose any additional financial burden on the State and local highway agencies.

(34) Request VIII-26(C)—Maximum Flash Rate at Railroad Highway Grade Crossings

This request is from the NCUTCD. The MUTCD currently requires that flashing light units at railroad-highway grade crossings shall flash alternately. Each incandescent lamp shall flash between a minimum of 35 and a maximum of 55 flashes per minute. The AAR Signal Manual of Recommended

Practices has recommended flash rates of 45 minimum and 65 maximum per minute. The Railroad-Highway Grade Crossing Handbook discusses flash rates between a minimum of 45 and a maximum of 65. These higher flash rates are supported by research. Some railroads are already reportedly using equipment that provides flash rates up to 60 per minute.

In order to insure that all three of the above documents are compatible, it is recommended that the MUTCD be revised to provide for a flash rate of 35 minimum and 65 maximum. This change will impose no additional requirements or additional costs. The FHWA supports this change.

(35) Request VIII-29(C)—Symbol for Railroad Advance Warning Sign

This request from a private citizen in Cheltenham, Pennsylvania, is to replace the standard round Railroad Advance Warning Sign (W10-1) with diamond shaped sign(s) as shown below. The rationale for this change is that the proposed warning signs are similar to other standard warning sign "crossing" messages as contained in the MUTCD.

The FHWA is not in favor of this proposal. The round Advance Warning Sign is intentionally unique from other warning signs and is intended to convey to motorists the special attention they need to apply when approaching a railroad-highway grade crossing.

BILLING CODE 4910-22-P

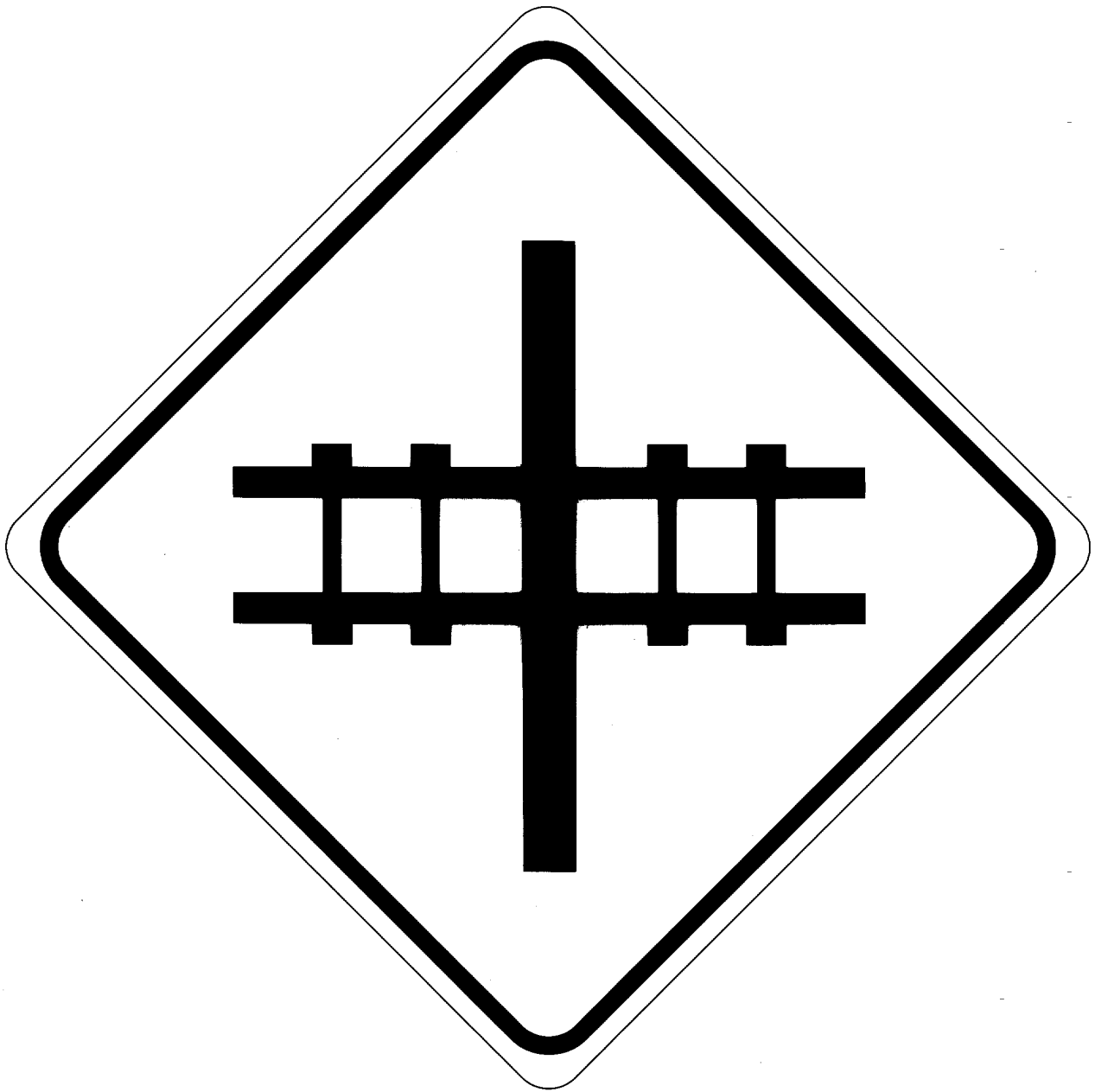


Figure 10



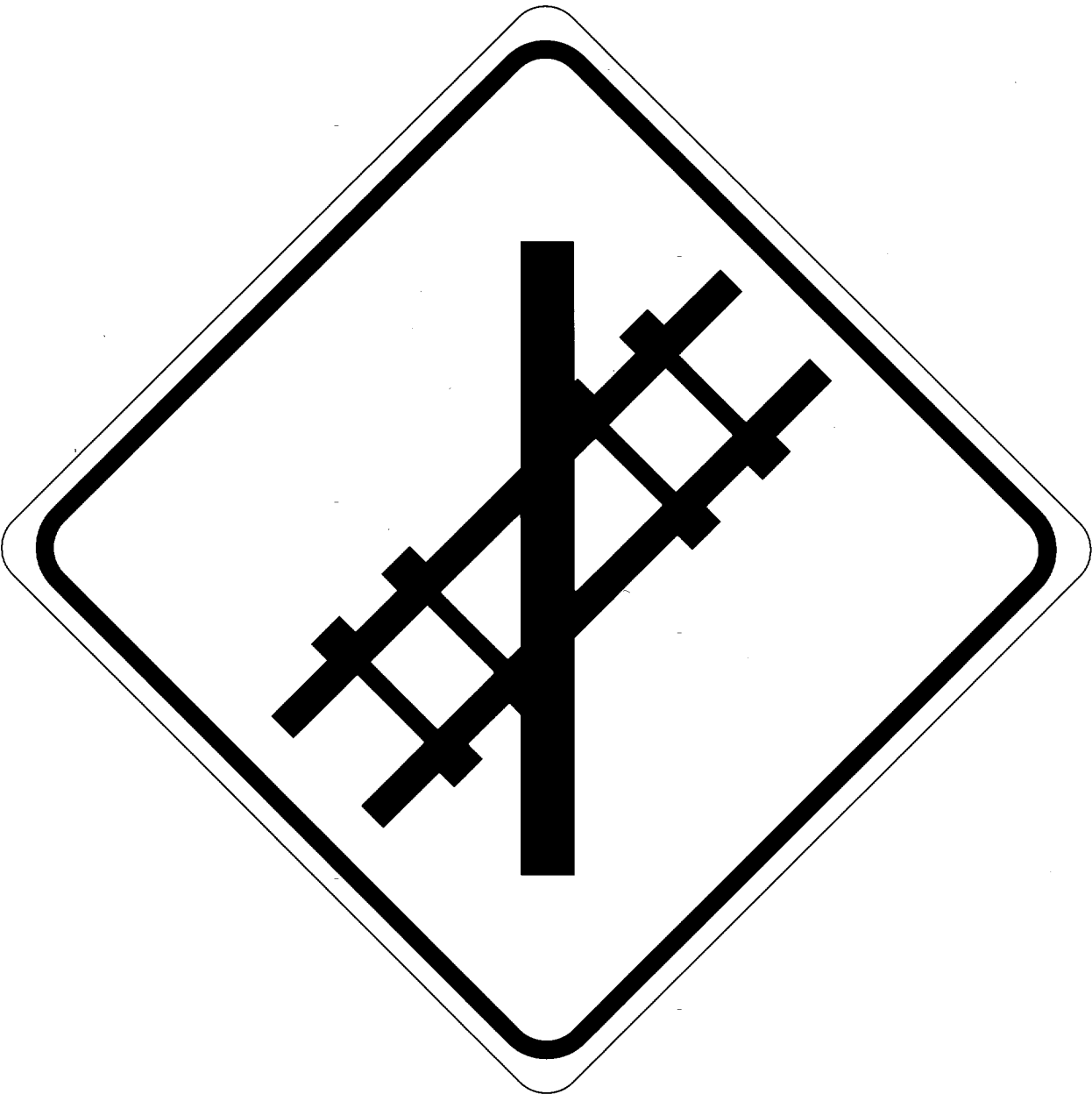


Figure 11

(36) Request VIII-30(C)—Symbol for Number of Tracks Sign

This request from a private citizen in Cheltenham, Pennsylvania, is to replace the standard Number of Tracks Sign (R15-2) with a symbol sign showing

tracks instead of the word "TRACKS." The symbol is shown below. The purpose stated for this request is to provide better understanding of traffic control signs for non-English speaking drivers.

The FHWA proposes to deny this request. The FHWA does not have any data to indicate that the standard Number of Tracks Sign is misunderstood by drivers.

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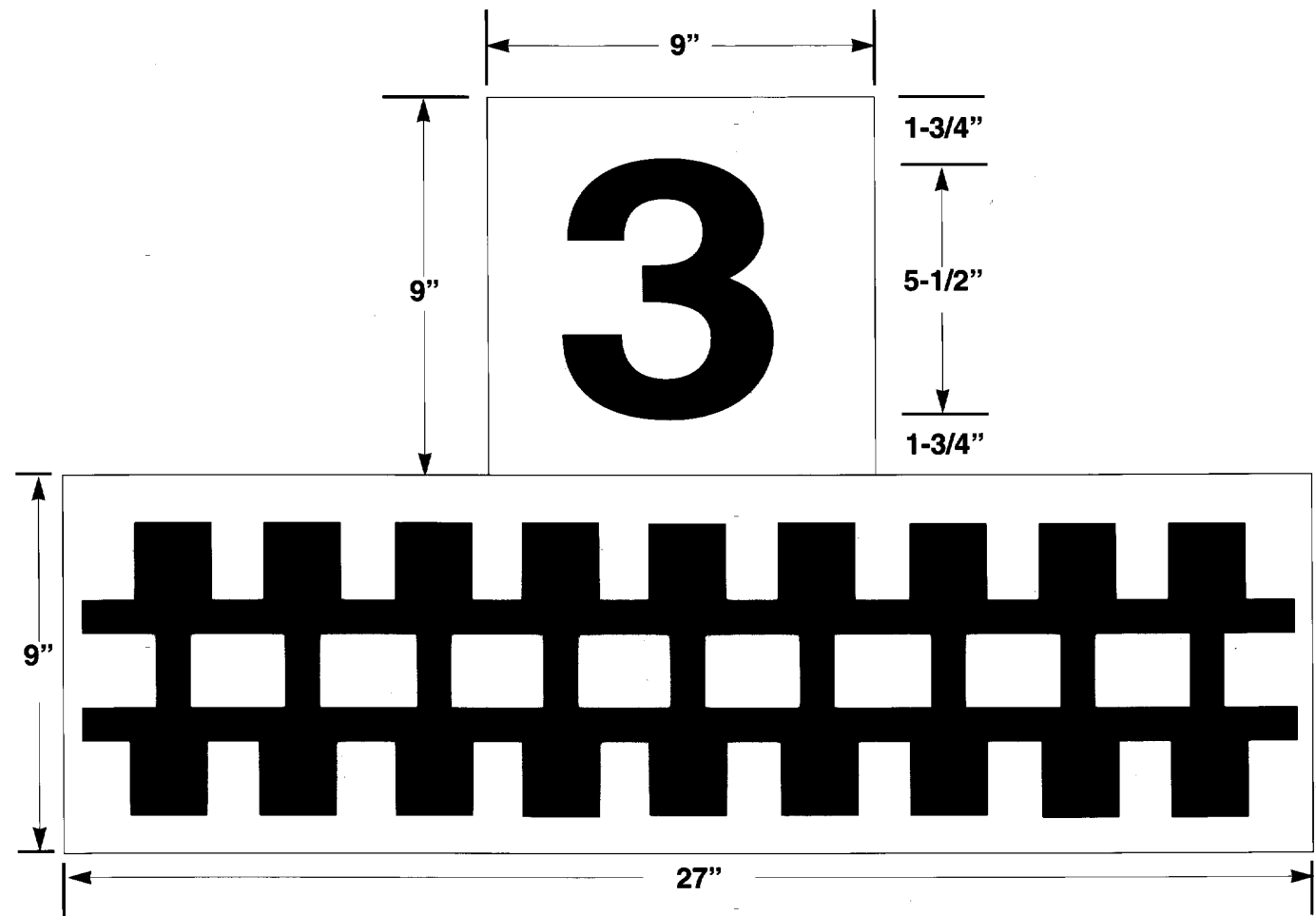


Figure 12

(37) Request VIII-36(C)—Signs and Markings for No Lane Change Zones at Railroad Crossings

The FHWA received a request from a private citizen in Pompano Beach, Florida, to require markings at railroad-highway grade crossings to prohibit vehicle lane changing on the tracks when there are two or more lanes in one direction. It was also recommended that longitudinal markings be placed 75 feet before a crossing and 75 feet beyond a crossing. These markings would designate a "safety zone" where no lane changing would be permitted.

The FHWA does not support adopting this as a MUTCD requirement because it believes that the implementation of "no passing zones" should be determined at each specific crossing based on an engineering study of that crossing.

(38) Request VIII-37(C)—Fast Train Signs

This request, from the Federal Railroad Administration (FRA), is for the development of a warning sign and warrants for use on approaches to high speed rail crossings that may or may not be already equipped with automatic warning devices. This warning sign would be a yellow diamond or circle and contain a message such as: "LOOK FOR HIGH SPEED TRAINS;" or "BEWARE FAST TRAINS." A

supplemental plaque indicating the number of tracks is also proposed. This sign would only be used at crossings where high speed trains (80 to 110 mph) operate. The FHWA invites comments on the shape, message, and criteria for application of this proposed sign.

(39) Request VIII-38(C)—Supplementary Plaques on STOP and YIELD Signs Used at Railroad-Highway Grade Crossings

This second request from the FRA is to permit the use of a supplementary plaque with STOP or YIELD Signs at railroad-highway grade crossings. The supplementary plaque would have a red background and white lettering with messages such as: 2-TRACKS; or WATCH FOR SECOND TRAIN; etc. The FHWA invites comments on the appropriateness of the proposed supplementary plaques. The FHWA is concerned that a lengthy message will result in a supplemental sign which may detract from the regulatory message of STOP or YIELD.

(40) Request VIII-39(C)—Warrants for Warning Devices at Railroad-Highway Grade Crossings With High Speed Train Operations

This third request from the FRA is to include in Part VIII of the MUTCD recommended application criteria

(warrants) for the use of warning devices, i.e., signs, active advance warning signs, flashers, gates, four-quadrant gates, gates with median barriers, constant warning time circuitry and/or means (loops) for vehicle detection at crossings hosting high speed trains (80 to 110 mph). The FHWA supports this proposal, as it is important that applications be standardized and uniform. Highway users should encounter similar warning systems for similar railroad-highway grade crossing situations throughout the country. The FHWA invites comments on the warrants which should be applied for warning devices at railroad-highway grade crossings where high speed train operations are present.

(41) Request VIII-40(C)—Placement of the Crossing Identification Number Tag

This fourth request from the FRA is to include in Part VIII of the MUTCD the standards for the design and placement of the U.S. DOT/AAR National Rail-Highway Crossing Inventory number plate. This proposal would specify the sign size, material used, and the location of the plate at the crossing. The FHWA supports this proposal for the uniformity of location and durability of this tag.

BILLING CODE 4910-22-P

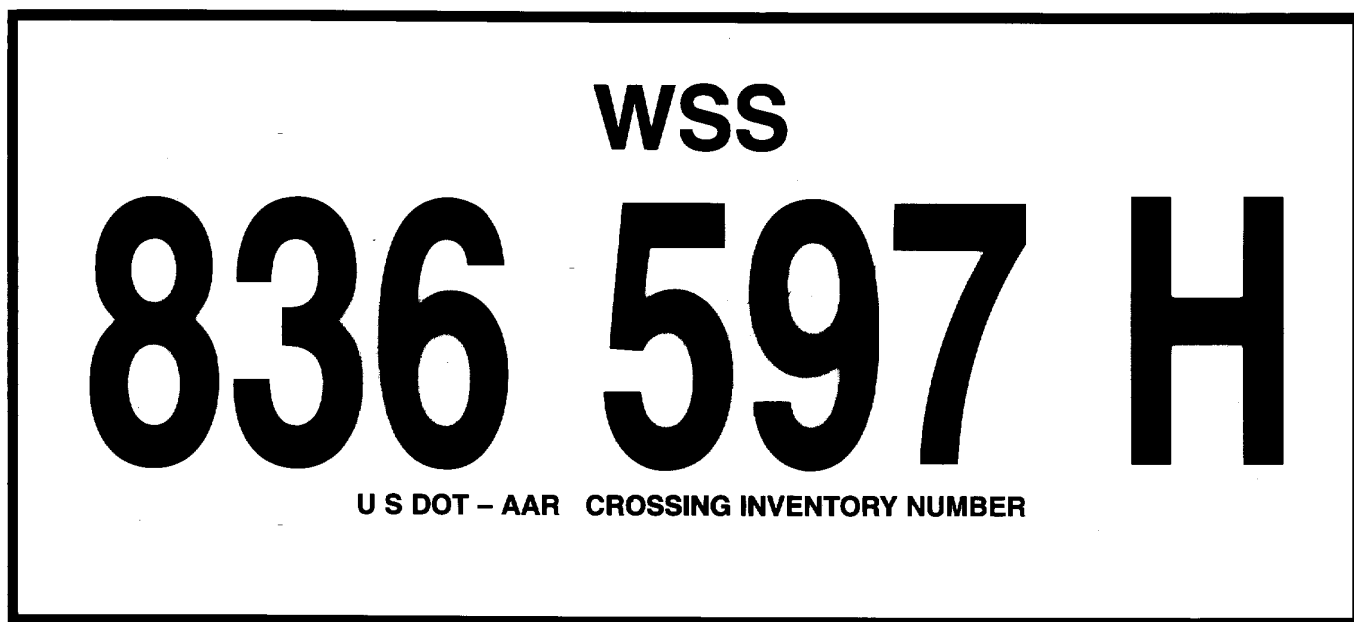


Figure 13

(42) Request IX-6(I)—Marking Hazardous Bicycle Conditions

The FHWA received an inquiry from a consulting engineer in Salem, Oregon, concerning whether or not the discussion in MUTCD section 9C-6 and the accompanying figure 9-7 is intended for bicycle facilities only. The diagram and discussion apply to any roadway situation where a hazardous drain, grate, or any other roadway condition may be hazardous to the bicyclist. The FHWA intends to include this clarification in the next edition of the MUTCD.

**Rulemaking Analyses and Notices; Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures**

The FHWA has determined that this action is not a significant regulatory action within the meaning of Executive Order 12866 or significant within the meaning of Department of Transportation regulatory policies and procedures. It is anticipated that the economic impact of this rulemaking would be minimal. Most of the changes proposed in this notice provide additional guidance, clarification, and optional applications for traffic control devices. The FHWA expects that application uniformity will improve at little additional expense to public agencies or the motoring public. Therefore, a full regulatory evaluation is not required.

**Regulatory Flexibility Act**

In compliance with the Regulatory Flexibility Act (Pub. L. 96-354, 5 U.S.C. 601-612), the FHWA has evaluated the effects of this proposed action on small entities, including small governments.

This notice of proposed rulemaking adds some alternative traffic control devices and only a very limited number of new or changed requirements. Most of the proposed changes are expanded guidance and clarification information. Based on this evaluation, the FHWA hereby certifies that this action would not have a significant economic impact on a substantial number of small entities.

**Executive Order 12612 (Federalism Assessment)**

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that this action would not have sufficient federalism implications to warrant the preparation of a federalism assessment. The MUTCD is incorporated by reference in 23 CFR part 655, subpart F, which requires that changes to the national standards issued by the FHWA shall be adopted by the States or other Federal agencies within two years of issuance. These proposed amendments are in keeping with the Secretary of Transportation's authority under 23 U.S.C. 109(d), 315, and 402(a) to promulgate uniform guidelines to promote the safe and efficient use of the highway. To the extent that these amendments override any existing State requirements regarding traffic control devices, they do so in the interests of national uniformity.

**Executive Order 12372 (Intergovernmental Review)**

Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive

Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

**Paperwork Reduction Act**

This action does not contain a collection of information requirement for purposes of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*

**National Environmental Policy Act**

The agency has analyzed this action for the purpose of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and has determined that this action would not have any effect on the quality of the environment.

**Regulation Identification Number**

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross reference this action with the Unified Agenda.

**List of Subjects in 23 CFR 655**

Design standards, Grant programs—transportation, Highways and roads, Incorporation by reference, Signs, Traffic regulations.

(23 U.S.C. 109(d), 114(a), 315, and 402(a); 23 CFR 1.32, 655.601, 655.602, and 655.603; 49 CFR 1.48)

Issued on: June 1, 1995.

**Rodney E. Slater,**

*Federal Highway Administrator.*

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